

SECTION 09658
CHEMICAL RESISTANT SHEET VINYL FLOOR COVERINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Sheet vinyl floor coverings without backing.
- B. Related Sections include the following:
 - 1. Division 9 Section "Resilient Tile Flooring" for resilient wall base, reducer strips, and other accessories installed with sheet vinyl floor coverings.

1.3 SUBMITTALS

- A. Product Data: For each type of product specified.
- B. Shop Drawings: Show location of seams and edges. Indicate location of columns, doorways, enclosing partitions, built-in furniture, cabinets, and cutout locations.
- C. Samples for Verification: In manufacturer's standard size, but not less than 6-by-9-inch sections of each different color and pattern of sheet vinyl floor covering specified, showing the full range of variations expected in these characteristics.
 - 1. For heat-welding bead, manufacturer's standard-size samples, but not less than 9 inches long, of each color specified.
- D. Product Certificates: Signed by manufacturers of sheet vinyl floor coverings certifying that each product furnished complies with requirements.
- E. Installer Certificates: Signed by manufacturer certifying that installers comply with specified requirements.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an installer who is competent in the technique required by manufacturer for heat-welding seams.
 - 1. Engage installers who are certified by floor covering manufacturer for heat-welded seam installation.
- B. Source Limitations: Obtain each type, color, and pattern of sheet vinyl floor covering specified from one source with resources to provide products of consistent quality in appearance and physical properties without delaying the Work.
- C. Fire-Test-Response Characteristics: Provide products with the following fire-test-response characteristics as determined by testing identical products per test method indicated below by a testing and inspecting agency acceptable to authorities having jurisdiction.
 - 1. Critical Radiant Flux: 0.45 W/sq. cm or greater when tested per ASTM E 648.
 - 2. Smoke Density: Maximum specific optical density of 450 or less when tested per ASTM E 662.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver sheet vinyl floor coverings and installation accessories to Project site in manufacturer's original, unopened cartons and containers, each bearing names of product and manufacturer, Project identification, and shipping and handling instructions.
- B. Store products in dry spaces protected from the weather, with ambient temperatures maintained between 50 and 90 deg F.
- C. Store rolls upright.
- D. Move sheet vinyl floor coverings and installation accessories into spaces where they will be installed at least 48 hours before installation, unless longer conditioning periods are recommended in writing by manufacturer.

1.6 PROJECT CONDITIONS

- A. Maintain a temperature of not less than 70 deg F or more than 95 deg F in spaces to receive sheet vinyl floor coverings for at least 48 hours before installation, during installation, and for at least 48 hours after installation, unless manufacturer's written recommendations specify longer time periods. After postinstallation period, maintain a temperature of not less than 55 deg F or more than 95 deg F.
- B. Do not install sheet vinyl floor coverings until they are at the same temperature as the space where they are to be installed.
- C. Close spaces to traffic during sheet vinyl floor covering installation and for time period after installation recommended in writing by manufacturer.
- D. Install sheet vinyl floor coverings and accessories after other finishing operations, including painting, have been completed.
- E. Do not install sheet vinyl floor coverings over concrete slabs until slabs have cured and are sufficiently dry to bond with adhesive, as determined by floor covering manufacturer's recommended bond and moisture test.

1.7 EXTRA MATERIALS

- A. Furnish extra materials described below that match products installed, are packaged with protective covering for storage, and are identified with labels describing contents.
 - 1. Furnish not less than 10 linear feet in roll form for each 500 linear feet or fraction thereof, of each different composition, wearing surface, color, and pattern of sheet vinyl floor covering installed.
 - 2. Deliver extra materials to Owner.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturer/Products: Subject to compliance with requirements, provide one of the following products:
 - 1. Mannington Mills, Inc.; Insight

2.2 SHEET VINYL FLOOR COVERINGS

- A. Sheet Vinyl Floor Coverings (Unbacked): Products complying with ASTM F 1303, Type II, except for wear-layer binder content and backing requirements, and with the following requirements.
- B. Unbacked Sheet Vinyl: Provide unbacked sheet vinyl floor covering complying with the following:

1. Color and Pattern: As selected by Construction Manager from manufacturer's full range of colors and patterns produced for sheet vinyl floor covering complying with requirements indicated.
 2. Binder Content: As specified by manufacturer's product designation indicated above.
 3. Thickness: 0.080 inch.
 4. Wearing Surface: Smooth.
 5. Sheet Width: As standard with manufacturer for product designation indicated above.
 6. Seaming Method: Heat welded.
- C. Chemical Resistance: Sheet vinyl flooring shall have the following ratings when tested with indicated reagents:

Reagent	Rating
Denatured Alcohol	0
Isopropanol 70% vol	0
Methanol	0
Isoamyl Acetate	0
Ethyl Acetate	0
Acetone	0
Formaldehyde 37%	0
Methyl Ethyl Ketone	0
Trichlorethylene	0
Benzosol	0
Gasoline	0
Kerosene	0
Mineral Spirits	0
Naphtha 68/72	0
Toluol	0
Xylene	0
Ammonium Hydroxide 30%	0
Ammonium Hydroxide 10%	0
Potassium Hyrdoxide 15%	0
Sodium Hydroxide 50%	0
Copper Sulfate 10%	0
Ferric Chloride	0
Lead Acetate 10%	0
Silver Nitrate	0
Acetic Acid 28%	0
Acetic Anhydride	0
Boric Acid 4%	0
Chromic Acid 1%	0
Glacial Acetic Acid	0
Hydrochloric Acid 38%	0
Hydrochloric Acid 10%	0

Reagent	Rating
Nitric Acid 70%	0
Phosphoric Acid 85%	0
Sulphuric Acid 98%	0
Sulphuric Acid 55%	0

2.3 INSTALLATION ACCESSORIES

- A. Trowelable Leveling and Patching Compounds: Latex-modified, portland-cement-based formulation provided or approved by floor covering manufacturer for applications indicated.
- B. Adhesives: Water-resistant type recommended by manufacturer to suit sheet vinyl floor covering and substrate conditions indicated.
- C. Heat-Welding Bead: Solid-strand product of floor covering manufacturer for heat-welding seams.
 - 1. Color and Pattern: Match color and pattern of sheet vinyl floor covering.
- D. Cove Strip: 1-inch- radius support for integral flash cove base provided or approved by floor covering manufacturer.
- E. Cove-Base Cap Strip: Square metal, vinyl, or rubber cap for integral flash cove base provided or approved by floor covering manufacturer.
- F. Metal Edge Strips: Extruded aluminum with mill finish of width shown, of height required to protect exposed edge of sheet vinyl floor coverings, and in maximum available lengths to minimize running joints.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions where installation of sheet vinyl floor coverings will occur, with Installer present, for compliance with manufacturer's requirements. Verify that substrates and conditions are satisfactory for floor covering installation and comply with requirements specified.
- B. Concrete Subfloors: Verify that concrete slabs comply with ASTM F 710 and the following:
 - 1. Slab substrates are dry and free of curing compounds, sealers, hardeners, and other materials that may interfere with adhesive bond. Determine adhesion and dryness characteristics by performing bond and moisture tests recommended by floor covering manufacturer.
 - 2. Subfloor finishes comply with requirements specified in Division 3 Section "Cast-in-Place Concrete" for slabs receiving resilient flooring.
 - 3. Subfloors are free of cracks, ridges, depressions, scale, and foreign deposits.
- C. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. General: Comply with sheet vinyl floor covering manufacturer's written installation instructions for preparing substrates indicated to receive sheet vinyl floor coverings.
- B. Use trowelable leveling and patching compounds, according to manufacturer's written instructions, to fill cracks, holes, and depressions in substrates.
- C. Remove coatings, including curing compounds, and other substances that are incompatible with flooring adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by manufacturer. Do not use solvents.

- D. Broom and vacuum clean substrates to be covered immediately before installing sheet vinyl floor coverings. After cleaning, examine substrates for moisture, alkaline salts, carbonation, or dust. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.3 INSTALLATION

- A. General: Comply with sheet vinyl floor covering manufacturer's written installation instructions.
- B. Unroll sheet vinyl floor coverings and allow them to stabilize before cutting and fitting, if recommended in writing by manufacturer.
- C. Lay out sheet vinyl floor coverings to comply with the following requirements:
 - 1. Maintain uniformity of sheet vinyl floor covering direction.
 - 2. Arrange for a minimum number of seams and place them in inconspicuous and low-traffic areas, and not less than 6 inches away from parallel joints in flooring substrates.
 - 3. Match edges of sheet vinyl floor coverings for color shading and pattern at seams according to manufacturer's written recommendations.
 - 4. Avoid cross seams.
- D. Scribe, cut, and fit sheet vinyl floor coverings to butt neatly and tightly to vertical surfaces and permanent fixtures, including built-in furniture, cabinets, pipes, outlets, edgings, door frames, thresholds, and nosings.
- E. Integral Flash Cove Base: Where indicated, cut sheet vinyl floor coverings to form integral base of height indicated at vertical surfaces.
- F. Extend sheet vinyl floor coverings into toe spaces, door reveals, closets, and similar openings.
- G. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on finish flooring as marked on subfloor. Use chalk or other nonpermanent, nonstaining marking device.
- H. Install sheet vinyl floor coverings on covers for telephone and electrical ducts, and similar items in finished floor areas. Maintain overall continuity of color and pattern with pieces of flooring installed on covers. Tightly adhere edges to perimeter of floor around covers and to covers.
- I. Adhere sheet vinyl floor coverings to flooring substrates to comply with floor covering manufacturer's written instructions, including those for trowel notching, adhesive mixing, and adhesive open and working times.
 - 1. Produce completed installation without open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, and other surface imperfections.
 - 2. Form integral flash cove base by flashing floor covering up vertical surfaces. Support floor covering at horizontal and vertical junction with cove strip. Butt floor covering at top of base against cap strip.
- J. Heat-Welded Seams: Rout joints and heat weld with welding bead, permanently fusing sections into a seamless floor covering. Prepare, weld, and finish seams according to manufacturer's written instructions and ASTM F 1516 to produce surfaces flush with adjoining floor covering surfaces.
- K. Hand roll sheet vinyl floor coverings in both directions from center out to embed floor coverings in adhesive and eliminate trapped air. At walls, door casings, and other locations where access by roller is impractical, press floor coverings firmly in place with flat-bladed instrument.

3.4 CLEANING AND PROTECTING

- A. Perform the following operations immediately after installing sheet vinyl floor coverings:
 - 1. Remove adhesive and other surface blemishes using cleaner recommended by floor covering manufacturer.
 - 2. Sweep or vacuum floor thoroughly.
 - 3. Do not wash floor covering until after time period recommended by floor covering manufacturer.

4. Damp-mop floor to remove marks and soil.
- B. Protect flooring against mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during the remainder of construction period. Use protection methods indicated or recommended in writing by floor covering manufacturer.
1. Apply protective floor polish to sheet vinyl floor covering surfaces that are free from soil, visible adhesive, and surface blemishes, if recommended in writing by manufacturer.
 - a. Use commercially available product acceptable to floor covering manufacturer.
 2. Cover sheet vinyl floor coverings with undyed, untreated building paper until inspection for Substantial Completion.
 3. Do not move heavy and sharp objects directly over sheet vinyl floor coverings. Place plywood or hardboard panels over floor coverings and under objects while they are being moved. Slide or roll objects over panels without moving panels.
- C. Clean sheet vinyl floor coverings not more than 4 days before dates scheduled for inspections intended to establish date of Substantial Completion in each area of Project. Clean floor coverings according to manufacturer's written recommendations.
1. Before cleaning, strip protective floor polish that was applied after completing installation only if required to restore polish finish and if recommended by floor covering manufacturer.
 2. After cleaning, reapply polish to floor surfaces to restore protective floor finish according to floor covering manufacturer's written recommendations. Coordinate with Owner's maintenance program.

END OF SECTION 09658